



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: McMackin et al.  
App. No.: 10/677,639 GPAU: 1763  
Filing Date: 10/02/2003 Examiner: (unassigned)  
Dkt. No.: PA74-16-03 Conf. No.: 4176  
For: SINGLE PHASE FLUID IMPRINT LITHOGRAPHY METHOD

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INFORMATION DISCLOSURE STATEMENT TRANSMITTAL

Commissioner for Patents  
P.O. Box 1450  
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Sir:

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- ☒ Form(s) PTO/SB/08A and/or PTO/SB/08B or PTO/1449  
☐ Other:

to the Examiner's attention in the above-identified application. It is respectfully requested that the cited information be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

FEES DUE

This Information Disclosure Statement is being filed:

- ☐ within three months of the filing date of a national application or within three months of the date of entry of the national stage as set forth in § 1.491 in an international application. Therefore, no fee is believed required.

- ☒ before the mailing date of a first Office action on the merits or before the mailing date of a first Office action after the filing of a request for continued examination under § 1.114. Therefore, no fee is believed required.
- ☒ Applicant(s) does not believe that any additional fees are due, but if the Commissioner believes additional fees are due, the Commissioner is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account Number 502650.

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Signed: Katrina Prati  
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Date: 10-28-04

Respectfully Submitted,



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| <b>Application Number</b>     | 10/677,639      |
| <b>Filing Date</b>            | 10/02/2003      |
| <b>First Named Inventor</b>   | McMackin et al. |
| <b>Group Art Unit</b>         | 1763            |
| <b>Examiner Name</b>          | Unassigned      |
| <b>Attorney Docket Number</b> | PA74-16-03      |

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

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Sheet 1 of 8

**U.S. PATENT DOCUMENTS**

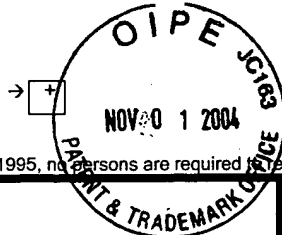
| Examiner Initials* | Cite No. <sup>1</sup> | U.S. Patent Document |                                   | Name of Patentee or Applicant of Cited Document | Date of Publication of Cited Document MM-DD-YYYY | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear |
|--------------------|-----------------------|----------------------|-----------------------------------|-------------------------------------------------|--------------------------------------------------|---------------------------------------------------------------------------|
|                    |                       | Number               | Kind Code <sup>2</sup> (if known) |                                                 |                                                  |                                                                           |
|                    | B1                    | 4,070,116            |                                   | Frosch et al.                                   | 01-24-1978                                       |                                                                           |
|                    | B2                    | 4,600,309            |                                   | Fay                                             | 07-15-1986                                       |                                                                           |
|                    | B3                    | 4,848,911            |                                   | Uchida et al.                                   | 07-18-1989                                       |                                                                           |
|                    | B4                    | 5,074,667            |                                   | Miyatake                                        | 12-24-1991                                       |                                                                           |
|                    | B5                    | 5,148,036            |                                   | Matsugu et al.                                  | 09-15-1992                                       |                                                                           |
|                    | B6                    | 5,148,037            |                                   | Suda et al.                                     | 09-15-1992                                       |                                                                           |
|                    | B7                    | 5,151,754            |                                   | Ishibashi et al.                                | 09-29-1992                                       |                                                                           |
|                    | B8                    | 5,179,863            |                                   | Uchida et al.                                   | 01-19-1993                                       |                                                                           |
|                    | B9                    | 5,376,810            |                                   | Hoenk et al.                                    | 12-27-1994                                       |                                                                           |
|                    | B10                   | 5,424,549            |                                   | Feldman                                         | 06-13-1995                                       |                                                                           |
|                    | B11                   | 5,670,415            |                                   | Rust                                            | 09-23-1997                                       |                                                                           |
|                    | B12                   | 5,743,998            |                                   | Park                                            | 04-28-1998                                       |                                                                           |
|                    | B13                   | 5,855,686            |                                   | Rust                                            | 01-05-1999                                       |                                                                           |
|                    | B14                   | 5,948,219            |                                   | Rohner                                          | 09-07-1999                                       |                                                                           |
|                    | B15                   | 6,035,805            |                                   | Rust                                            | 03-14-2000                                       |                                                                           |
|                    | B16                   | 6,150,680            |                                   | Eastman et al.                                  | 11-21-2000                                       |                                                                           |
|                    | B17                   | 6,326,627            | B1                                | Putvinski et al.                                | 12-04-2001                                       |                                                                           |
|                    | B18                   | 2002/0132482         | A1                                | Chou                                            | 09-19-2002                                       |                                                                           |
|                    | B19                   | 2002/0167117         | A1                                | Chou                                            | 11-14-2002                                       |                                                                           |
|                    | B20                   | 6,482,742            | B1                                | Chou                                            | 11-19-2002                                       |                                                                           |
|                    | B21                   | 6,534,418            | B1                                | Plat et al.                                     | 03-18-2003                                       |                                                                           |
|                    | B22                   | 6,541,360            | B1                                | Plat et al.                                     | 04-01-2003                                       |                                                                           |
|                    | B23                   | 2003/0081193         | A1                                | White et al.                                    | 05-01-2003                                       |                                                                           |
|                    | B24                   | 2003/0080471         | A1                                | Chou                                            | 05-01-2003                                       |                                                                           |
|                    | B25                   | 2004/0036201         | A1                                | Chou et al.                                     | 02-26-2004                                       |                                                                           |
|                    | B26                   | 5,468,542            |                                   | Crouch                                          | 11-21-1995                                       |                                                                           |
|                    | B27                   | 5,366,851            |                                   | Novembre                                        | 11-22-1994                                       |                                                                           |
|                    | B28                   | 5,362,606            |                                   | Hartney et al.                                  | 11-08-1994                                       |                                                                           |
|                    | B29                   | 5,324,683            |                                   | Fitch et al.                                    | 06-28-1994                                       |                                                                           |
|                    | B30                   | 5,212,147            |                                   | Sheats                                          | 05-18-1993                                       |                                                                           |
|                    | B31                   | 5,458,520            |                                   | DeMercurio et al.                               | 10-17-1995                                       |                                                                           |
|                    | B32                   | 5,453,157            |                                   | Jeng                                            | 09-26-1995                                       |                                                                           |
|                    | B33                   | 5,439,766            |                                   | Day et al.                                      | 08-08-1995                                       |                                                                           |
|                    | B34                   | 5,431,777            |                                   | Austin et al.                                   | 07-11-1995                                       |                                                                           |
| Examiner Signature |                       |                      |                                   |                                                 | Date Considered                                  |                                                                           |

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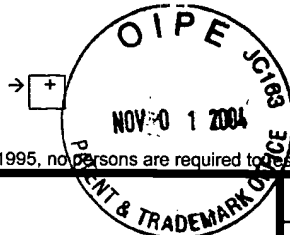
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|                    | B35                   | 5,422,295            |                                   | Choi et al.                                     | 06-06-1995                                       |                                                                           |
|                    | B36                   | 5,421,981            |                                   | Leader et al.                                   | 06-06-1995                                       |                                                                           |
|                    | B37                   | 5,417,802            |                                   | Obeng                                           | 05-23-1995                                       |                                                                           |
|                    | B38                   | 5,380,474            |                                   | Rye et al.                                      | 01-10-1995                                       |                                                                           |
|                    | B39                   | 5,374,454            |                                   | Bickford et al.                                 | 12-20-1994                                       |                                                                           |
|                    | B40                   | 5,330,881            |                                   | Sidman et al.                                   | 07-19-1994                                       |                                                                           |
|                    | B41                   | 5,328,810            |                                   | Lowrey et al.                                   | 07-12-1994                                       |                                                                           |
|                    | B42                   | 5,318,870            |                                   | Hartney                                         | 06-07-1994                                       |                                                                           |
|                    | B43                   | 5,244,818            |                                   | Jokerst et al.                                  | 09-14-1993                                       |                                                                           |
|                    | B44                   | 5,242,711            |                                   | DeNatale et al.                                 | 09-07-1993                                       |                                                                           |
|                    | B45                   | 5,240,878            |                                   | Fitzsimmons et al.                              | 08-31-1993                                       |                                                                           |
|                    | B46                   | 5,108,875            |                                   | Thackeray et al.                                | 04-28-1992                                       |                                                                           |
|                    | B47                   | 5,053,318            |                                   | Gulla et al.                                    | 10-01-1991                                       |                                                                           |
|                    | B48                   | 4,964,945            |                                   | Calhoun                                         | 10-23-1990                                       |                                                                           |
|                    | B49                   | 4,908,298            |                                   | Hefferon et al.                                 | 03-13-1990                                       |                                                                           |
|                    | B50                   | 4,921,778            |                                   | Thackeray et al.                                | 05-01-1990                                       |                                                                           |
|                    | B51                   | 4,919,748            |                                   | Bredbenner et al.                               | 04-24-1990                                       |                                                                           |
|                    | B52                   | 3,783,520            |                                   | King                                            | 01-08-1974                                       |                                                                           |
|                    | B53                   | 6,776,094            | B1                                | Whitesides et al.                               | 08-17-2004                                       |                                                                           |
|                    | B54                   | 4,201,800            |                                   | Alcorn et al.                                   | 05-06-1980                                       |                                                                           |
|                    | B55                   | 4,426,247            |                                   | Tamamura et al.                                 | 01-17-1984                                       |                                                                           |
|                    | B56                   | 4,507,331            |                                   | Hiraoka                                         | 03-26-1985                                       |                                                                           |
|                    | B57                   | 4,552,833            |                                   | Ito et al.                                      | 11-12-1985                                       |                                                                           |
|                    | B58                   | 4,657,845            |                                   | Frechet et al.                                  | 04-14-1987                                       |                                                                           |
|                    | B59                   | 4,692,205            |                                   | Sachdev et al.                                  | 09-08-1987                                       |                                                                           |
|                    | B60                   | 4,707,218            |                                   | Giammarco et al.                                | 11-17-1987                                       |                                                                           |
|                    | B61                   | 4,737,425            |                                   | Lin et al.                                      | 04-12-1988                                       |                                                                           |
|                    | B62                   | 4,808,511            |                                   | Holmes                                          | 02-28-1989                                       |                                                                           |
|                    | B63                   | 4,826,943            |                                   | Ito et al.                                      | 05-02-1989                                       |                                                                           |
|                    | B64                   | 4,857,477            |                                   | Kanamori                                        | 08-15-1989                                       |                                                                           |
|                    | B65                   | 4,891,303            |                                   | Garza et al.                                    | 01-02-1990                                       |                                                                           |
|                    | B66                   | 4,931,351            |                                   | McColgin et al.                                 | 06-05-1990                                       |                                                                           |
|                    | B67                   | 4,976,818            |                                   | Hashimoto et al.                                | 12-11-1990                                       |                                                                           |
|                    | B68                   | 4,980,316            |                                   | Huebner                                         | 12-25-1990                                       |                                                                           |
| Examiner Signature |                       |                      |                                   |                                                 | Date Considered                                  |                                                                           |

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|                    | B69                   | 4,999,280            |                                   | Hiraoka                                         | 03-12-1991                                       |                                                                           |
|                    | B70                   | 5,071,694            |                                   | Uekita et al.                                   | 12-10-1991                                       |                                                                           |
|                    | B71                   | 5,169,494            |                                   | Hashimoto et al.                                | 12-08-1992                                       |                                                                           |
|                    | B72                   | 5,173,393            |                                   | Sezi et al.                                     | 12-22-1992                                       |                                                                           |
|                    | B73                   | 5,198,326            |                                   | Hashimoto et al.                                | 03-30-1993                                       |                                                                           |
|                    | B74                   | 5,234,793            |                                   | Sebald et al.                                   | 08-10-1993                                       |                                                                           |
|                    | B75                   | 5,314,772            |                                   | Kozicki et al.                                  | 05-24-1994                                       |                                                                           |
|                    | B76                   | 5,527,662            |                                   | Hashimoto et al.                                | 06-18-1996                                       |                                                                           |
|                    | B77                   | 5,654,238            |                                   | Cronin et al.                                   | 08-05-1997                                       |                                                                           |
|                    | B78                   | 5,700,626            |                                   | Lee et al.                                      | 12-23-1997                                       |                                                                           |
|                    | B79                   | 5,736,424            |                                   | Prybyla et al.                                  | 04-07-1998                                       |                                                                           |
|                    | B80                   | 5,895,263            |                                   | Carter et al.                                   | 04-20-1999                                       |                                                                           |
|                    | B81                   | 5,907,782            |                                   | Wu                                              | 05-25-1999                                       |                                                                           |
|                    | B82                   | 5,926,690            |                                   | Toprac et al.                                   | 07-20-1999                                       |                                                                           |
|                    | B83                   | 5,948,570            |                                   | Kornblit et al.                                 | 09-07-1999                                       |                                                                           |
|                    | B84                   | 6,033,977            |                                   | Gutsche et al.                                  | 03-07-2000                                       |                                                                           |
|                    | B85                   | 6,096,655            |                                   | Lee et al.                                      | 08-01-2000                                       |                                                                           |
|                    | B86                   | 6,150,231            |                                   | Muller et al.                                   | 11-21-2000                                       |                                                                           |
|                    | B87                   | 6,245,581            | B1                                | Bonser et al.                                   | 06-12-2001                                       |                                                                           |
|                    | B88                   | 6,274,294            | B1                                | Hines                                           | 08-14-2001                                       |                                                                           |
|                    | B89                   | 6,329,256            | B1                                | Ibok                                            | 12-11-2001                                       |                                                                           |
|                    | B90                   | 6,383,928            | B1                                | Eissa                                           | 05-07-2002                                       |                                                                           |
|                    | B91                   | 6,387,783            | B1                                | Furukawa et al.                                 | 05-14-2002                                       |                                                                           |
|                    | B92                   | 6,388,253            | B1                                | Su                                              | 05-14-2002                                       |                                                                           |
|                    | B93                   | 6,391,798            | B1                                | DeFelice et al.                                 | 05-21-2002                                       |                                                                           |
|                    | B94                   | 6,455,411            | B1                                | Jiang et al.                                    | 09-24-2002                                       |                                                                           |
|                    | B95                   | 6,489,068            | B1                                | Kye                                             | 12-03-2002                                       |                                                                           |
|                    | B96                   | 6,514,672            | B2                                | Young et al.                                    | 02-04-2003                                       |                                                                           |
|                    | B97                   | 6,561,706            | B2                                | Singh et al.                                    | 05-13-2003                                       |                                                                           |
|                    | B98                   | 6,565,928            | B2                                | Sakamoto et al.                                 | 05-20-2003                                       |                                                                           |
|                    | B99                   | 2003/011368          | A1                                | Mancini et al.                                  | 06-19-2003                                       |                                                                           |
|                    | B100                  | 2003/0129542         | A1                                | Shih et al.                                     | 07-10-2003                                       |                                                                           |
|                    | B101                  | 6,632,742            | B2                                | Yang et al.                                     | 10-14-2003                                       |                                                                           |
|                    | B102                  | 6,635,581            | B2                                | Wong                                            | 10-21-2003                                       |                                                                           |
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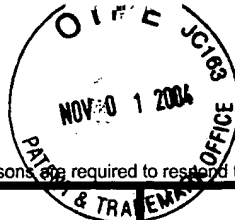
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| <b>INFORMATION DISCLOSURE<br/>STATEMENT BY APPLICANT</b><br><br>(use as many sheets as necessary) |   |    |   | Application Number       | 10/677,639      |
|                                                                                                   |   |    |   | Filing Date              | 10/02/2003      |
|                                                                                                   |   |    |   | First Named Inventor     | McMackin et al. |
|                                                                                                   |   |    |   | Group Art Unit           | 1763            |
|                                                                                                   |   |    |   | Examiner Name            | Unassigned      |
| Sheet                                                                                             | 6 | of | 8 | Attorney Docket Number   | PA74-16-03      |

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|                                                   | B125                  | Abstract of Japanese Patent 63-138730                                                                                                                                                                                                                           |                |
|                                                   | B126                  | Abstract of Japanese Patent 55-88332                                                                                                                                                                                                                            |                |
|                                                   | B127                  | Abstract of Japanese Patent 57-7931                                                                                                                                                                                                                             |                |
|                                                   | B128                  | Abstract of Japanese Patent 02-92603.                                                                                                                                                                                                                           |                |
|                                                   | B129                  | Translation of Japanese Patent 02-92603.                                                                                                                                                                                                                        |                |
|                                                   | B130                  | Abstract of Japanese Patent 02-24848.                                                                                                                                                                                                                           |                |
|                                                   | B131                  | Translation of Japanese Patent 02-24848.                                                                                                                                                                                                                        |                |
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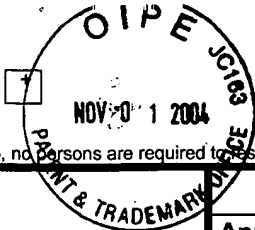
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|                                                   | B136     | HU et al., "Flourescence Probe Techniques (FPT) for Measuring the Relative Efficiencies of Free-Radical Photoinitiators", s0024-9297(97)01390-9; "Macromolecules" 1998, vol. 31, no.13, pp. 4107-4113, 1998 American Chemical Society. Published on Web 05/29/1998 |                |
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|                                                   | B138     | CIBA SPECIALTY CHEMICALS BUSINESS LINE COATINGS, "What is UV Curing?", 45 pp [online][Retreived 9/24/04 from URL:http://www.cibasc.com/image.asp?id=4040.                                                                                                          |                |
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|                                                   | B147     | Abstract of Roos et al., "Nanoimprint Lithography with a Commerical 4 Inch Bond System for Hot Embossing," October 2001, pp. 427-435, vol. 4343.                                                                                                                |                |
|                                                   | B148     | Bagen, S., (BAGEN@aol.com) , 18 Sept 1997. "Photoresist Coating Method." Email to Dhavel Shah.                                                                                                                                                                  |                |
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|                                                   | B152     | KIM et al., "Reducing Photocurable Polymer Pattern Shrinkage and Roughness during Dry Etching in Photo-Nanoimprint Lithography", Japanese Journal of Applied Physics, Published June 29, 2004, Vol. 43, pp. 4022-4026, No. 6B.                                  |                |
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|                                                   | B154     | NAKAMATSU et al., Japanese Journal of Applied Physics, Published June 29, 2004, Vol. 43, pp. 4050-4053, No. 6B                                                                                                                                                  |                |
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